

Title of Invention

[0001] Ion Hair Trimming Device

Summary

[0002] The present invention relates to grooming devices, more specifically hair clipping devices designed for use in trimming hair. The device includes a motor, an electrostatic ion generator, a power cord, a switch and an indicating light, all housed within an elongated plastic housing. The device also utilizes a tapered blade assembly at one end of the device housing. The power cord is connected to the switch and the switch is connected to control the motor, electrostatic ion generator and indicating light. When the switch is engaged it provides power to the motor, electrostatic ion generator and indicating light. The electrostatic ion generator's output is coupled between positive and negative electrode arrays. Preferably, the positive electrode array is a pointed electrode and the negative electrode array includes an annular-like electrode having a central opening coaxial with the associated pointed electrode. Preferably, the annular-like electrodes are formed from a single sheet of metal by extrusion or punching such that the surface of the annular-like electrode is smooth and continuous. The opening for the discharge of the ions is positioned so that the ions are directed towards the hair being trimmed.

[0003] Cutting hair requires precise control of hair being trimmed in order to get a clean, crisp hair trim. In order to get a perfect hair trim one is required to thoroughly wet the hair or utilize other styling agents in order to maintain tight control of the hair being trimmed. It is therefore beneficial to have a hair trimming device that would allow a person to achieve a precise hair trim without having to wet or utilize styling agents on the hair thus causing hair to stick on the blades of the trimming device. It is thus an object of the present invention to allow the user to trim hair without having to wet or utilize styling agents on the hair. The present invention utilizes an electrostatic ion generator that discharges negative ions onto the hair in order to have better control of the hair by eliminating static control and frizzys caused by the constant combing during trimming. The negative ions provide two benefits, (i) eliminating static control, thus eliminating flyaway hair and (ii) attaching themselves to the positively charged hair being trimmed

and causing the trimmed hair to fall to the floor instead of being attracted to the cutting blades that create positive ions due to their cutting motion.

[0004] Throughout this disclosure, unless the context dictates otherwise, the word "comprise" or variations such as "comprises" or "comprising," is understood to mean "includes, but is not limited to" such that other elements that are not explicitly mentioned may also be included. Further, unless the context dictates otherwise, use of the term "a" may mean a singular object or element, or it may mean a plurality, or one or more of such objects or elements.

Brief Description of the Drawings

[0005] The following drawings form part of the present specification and are included to further demonstrate certain aspects of the present invention. The invention may be better understood by reference to one or more of these drawings in combination with the detailed description of specific embodiments presented herein.

[0006] Fig. 1 is a top view of a preferred embodiment of a trimming device.

[0007] Fig. 2 is a side view of a preferred embodiment of a trimming device.

[0008] Fig. 3 is an electrical diagram used in preferred embodiments of a trimming device.

Detailed Description

[0009] An embodiment of the present invention is shown in top view in Figure 1. The preferred device **10** is an electric hair trimming device as is often used in hair styling applications. The device includes a housing **12** that may be composed of a plastic or metal material, metal cutting blades **14** and a power cord **16** for connection to a power source. The embodiment shown in Figure 1 includes the power switch **18** with which the device is turned on or off. An indicator light **20** connected to the power switch provides an indication that the device power is on. The top of the device also includes an opening **22** for ion discharge. In preferred embodiments the blades may be made of stainless steel, titanium, carbon steel or other metallic materials. Also shown are opposing latches **24** that allow a user to remove the blades to add different attachments to the device.

[00010] A side view of the preferred device is shown in Figure 2. In preferred embodiments the housing **12** is composed of two pieces, a top housing **26** and a bottom

housing 28. In the view shown in Figure 2, part of the housing is cut away to show the internal features of the device. Shown within the housing is an electrostatic ion generator 30, which generates a voltage across the positive 32 and negative 34 electrodes, thus creating a flow of ions through the opening 22. Also shown within the housing is a printed circuit board 36 containing the device's electrical circuits.

[00011] A schematic view of an electrical circuit of the device is shown in Figure 3. The circuits shown include the power switch, the electronic display/indicator circuit, motor and the ion generation circuit.